Bicycle and Pedestrian Transportation | Policy Paper

TranPlan 21 – 2002 Update

State of Montana
Department of Transportation

TRANPLAN 21

Montana Department of Transportation

Bicycle and Pedestrian Transportation Policy Paper

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I. Background

This paper is the *TranPlan 21 2002 Update* to the Montana Department of Transportation (MDT) policy goals and actions for bicycle and pedestrian transportation. It updates and replaces the 1995 Bicycle and Pedestrian Transportation Policy Paper.

A. Bicycle and Pedestrian Modes in Montana

Analysis of bicycle and pedestrian data commonly distinguishes between work-related trips and errands as opposed to recreational trips. The primary source of data from which to draw conclusions about bicycle ridership and pedestrian activity is the transportation to-work data collected for the 2000 Census. These data are summarized in Exhibit I–1 for the state as a whole, and in Exhibit I–2 for selected Montana counties. These data reveal that:

- In both 1990 and 2000, walking or biking represented the third most frequently used mode of transportation to work, after driving alone or carpooling.
- The number of Montanans who walked or biked to work decreased from 30,231 to 27, 385, or from 8.7 to 6.5 percent, between 1990 and 2000.
- Missoula is the only Montana county with urban areas that experienced an increase in walking or biking to work between 1990 and 2000.

Exhibit I–1: Montana Statewide Means of Transportation to Work in 2000 (Age 16 and Over)

Mode	1990		2000	
	Number	Percent	Number	Percent
Drove alone	250,373	71.7	311,872	73.9
Carpooled	41,442	11.9	50,192	11.9
Public transportation (including taxicab)	2,050	0.6	2,812	0.7
Bicycle or walked	30,231	8.7	27,385	6.5
Motorcycle or other means	3,212	0.9	2,987	0.7
Worked at home	21,876	6.3	26,911	6.4
Statewide Total	**349,184**	**100.0**	**422,159**	**100.0**

Source: U.S. Department of Commerce, Bureau of the Census.

Exhibit I–2: Bicycled or Walked to Work in Selected Montana Counties with Urban Areas

	1990		2000	
County	**Number**	**Percent***	**Number**	**Percent***
Cascade	2,095	6.0	1,388	3.7
Custer	572	10.9	325	5.9
Deer Lodge	308	8.9	211	5.6
Fergus	527	10.3	452	8.3
Flathead	1,530	6.1	1,574	4.6
Gallatin	3,073	12.5	3,224	8.8
Hill	545	7.2	475	6.5
Lewis & Clark	1,941	8.4	1,761	6.2
Missoula	3,007	8.3	4,493	9.1
Park	647	10.4	600	7.8
Silver Bow	909	6.6	673	4.3
Yellowstone	2,413	4.5	1,971	3.0
Statewide Total	**30,231**	**8.7**	**27,385**	**6.5**

Source: U.S. Department of Commerce, Bureau of the Census.
Note (*): Percent of total journey-to-work trips in city

There is little information on either mode of transportation for recreational trips. There is no systematic information available about touring and recreational bicycle use either by Montanans or out-of-state cyclists and tour groups. However, the Missoula-based Adventure Cycling organization has established several nationally publicized cross-country routes through Montana and there are a number of active local bicycle clubs that organize rides and other events. The types of information that help plan for bicycle needs include: 1) periodicity, or how frequently recreational rides take place; 2) the characteristics of the riders, including whether they are separate individuals or family groups; 3) the length of the recreational trips; and 4) the routes that are most popular with riders.

Walking is an element in almost every trip. Transportation-to-work is the only systematic walking data available at the state level, and does not include the use of pedestrian facilities by those under 16 or walking for errands and other activities. One reason for the importance of pedestrian trips in Montana is that the states' urban areas are relatively old and were built as towns with much greater density than today's development patterns. Walking is also a traditional form of transportation in small towns across Montana. Public input in *TranPlan 21* indicated that walking, even long distance walking, is also a traditional form of transportation on some of Montana's reservations.

B. National Trends

Over the past decade there has been an increased national interest in the ownership and use of bicycles.

The National Bicycling and Walking Study conducted by the Federal Highway Administration found that by the end of 1993, there were more than 100 million bicyclists in the United States, which represents an increase of over 33 percent in the last 10 years. More than half of the United States' cyclists are adults. Ownership of bicycles is increasing. In 1993, 13 million bicycles were sold in the United States, the highest level in 10 years. In a Harris Poll survey, half of America's adult bicyclists said they would commute to work or school at least occasionally if there were safe places to ride. (*National Bicycling and Walking Study*. Federal Highway Administration, 1991). The same survey showed that nearly 60 percent of all Americans want the government to devote more funds to making the transportation system more bicycle and pedestrian friendly. Bicycle advocates argue that the potential for shifting trips from driving alone to bicycling or walking is significant because 25 percent of trips are one mile or less, 40 percent are two miles or less, and 66 percent are five miles or less.

C. Changing Policy Environment

1. Federal Policies

In recent years, federal policy has placed increased emphasis on providing bicycle and pedestrian facilities as part of the transportation system. In 1990, the U.S. Department of Transportation stated that it is national policy to: "Promote increased use of bicycling, and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities in urban and suburban areas" (*National Bicycling and Walking Study*, Federal Highway Administration, 1991).

Title 23 U.S.C., as amended by the Intermodal Surface Transportation Efficiency Act (ISTEA) requires the state departments of transportation and metropolitan planning organizations to include bicycle and pedestrian consideration in their transportation plans and project development activities. The Transportation Efficiency Act for the Twenty-first Century (TEA-21) continues these requirements and bicycle and pedestrian use of transportation facilities is now an established part of transportation policy and planning in Montana.

Policy statements by Congress, the U.S. Department of Transportation, and the Federal Highway Administration state, "the federal policy goal for bicycling (specifically) is to accommodate current use and to encourage increased use, while enhancing safety."

2. State Requirements

Historically, MDT has been actively involved in funding, planning, and developing bicycle and pedestrian facilities. The 1985 Footpath and Bicycle Act (Montana Code Annotated 60-3-301) is the only Montana statute that specifically addresses bicycle and pedestrian funding. This act sets a minimum annual spending requirement for

footpaths and bicycle trails. Through the federal programs and other initiatives, MDT has consistently exceeded this minimum requirement.

D. Status of Bicycle and Pedestrian Facility Planning and Development in Montana

MDT has responded to an increased public interest in bicycles and new federal mandates by implementing a range of bicycle and pedestrian projects and establishing a state-level program. Montana's metropolitan and urban planning organizations and tribal governments are also undertaking planning and project development to address bicycle and pedestrian needs. Current efforts are discussed below.

1. State-level Bicycle and Pedestrian Planning

The status of the major elements of the MDT's bicycle program are summarized below:

- **Bicycle and pedestrian coordinator**

  MDT has established a state bicycle and pedestrian coordinator as required under Federal law. The coordinator is responsible for addressing non-motorized transportation considerations. This position is currently a full time position located in the Multimodal Planning Bureau. The person performs the following tasks: responds to specific requests for assistance; provides technical assistance (in the areas of justification, agreements and design standards) to state and local governmental agencies and other divisions and bureaus within MDT; distributes bicycle tourist information; acts as a clearing house for bicycle and pedestrian safety information; coordinates training for MDT staff on bicycle and pedestrian facility design; and serves on the State Trails Committee. The coordinator is currently developing a process to ensure that pedestrian and bicycle concerns are consistently addressed early in the project development process.

  Many communities have financed bicycle and pedestrian facilities. This has resulted in many technical assistance requests to the coordinator. Coordinating the use of Congestion Management and Air Quality Improvement Program funds for bicycle and pedestrian improvements is also the state coordinator's responsibility.

- **Consideration in advance planning and design**

  Bicycle and pedestrian facilities are considered in the project development process. Typically, bicycle and pedestrian needs are identified in urban area plans as stand-alone projects or as part of reconstruction projects. MDT also takes into account the potential for increased bicycle and pedestrian usage near state and national parks and nationally publicized bicycle-touring routes. These needs are also identified as part of project scoping for reconstruction projects.

- **Bicycle and pedestrian facilities are receiving funding**

  Montana is currently in the tenth year of administering the Community Transportation Enhancement Program. Annually, this program provides the mechanism for allocating about $5 million to Montana jurisdictions. Over one-

half of the enhancement projects selected by local units of government involve facilities for bicycles and pedestrians. Congestion Management and Air Quality Improvement Program and the Montana Air and Congestion Initiative funds have been used for several bicycle and pedestrian projects throughout the state. In addition, a number of urban and rural highway projects have included bicycle and pedestrian improvements funded with other federal funding.

All three Montana metropolitan planning organizations and other communities have completed non-motorized transportation plans. Bicycle and pedestrian components are included in MDT-sponsored transportation plans for several smaller Montana urban areas as well.

2. Tribal Governments and Local Jurisdictions

- **Tribal governments are planning for non-motorized modes**

  A number of the tribal governments are planning bicycle and pedestrian facilities. This is particularly important on the reservations for both safety and mobility. For many, bicycles and walking offer an affordable means of transportation.

II. Key Bicycle and Pedestrian Policy Issues

The following lists the issues raised by the public concerning bicycle facilities and some technical planning issues.

A. Public Interest in Bicycle and Pedestrian Facilities

Public involvements undertaken as part of MDT's statewide planning process and recent experience during project development reveal a strong public interest in the provision of bicycle and pedestrian facilities. Among the key issues are the following:

- An interest in bicycle and pedestrian facilities for commuting, transportation, recreation, and the preservation of environmental quality.
- A desire for increasing and improving bicycle and pedestrian facilities and safety, most notably in urban areas.
- The need to recognize the geographic and climatic constraints in Montana and the limited role for some bicycle facilities in rural areas.
- The importance of avoiding system discontinuity, by considering urban, rural, and regional differences.

B. Planning for Bicycles and Pedestrians in Montana

The considerable public interest in bicycle and pedestrian facilities expressed through public involvement processes around the state raises a number of planning issues. Simply put, these issues concern how to address bicycle and pedestrian needs in a very large, sparsely populated, rural state that experiences long, cold winters. Furthermore, in addressing bicycle and pedestrian needs, it is important to determine the role that bicycles and pedestrian facilities can play as part of Montana's overall multimodal transportation system.

1. Bicycling and Walking as Modal Options in Montana

Almost all Montanans do bicycling and walking to some degree. Based on journey-to-work data, bicycling is used as a mode of transportation by a small proportion of Montana's population. However, a large number of people walk to work, stores, and schools. Viewed from a twenty year planning perspective, bicycling and walking can provide alternative means of transportation and have the potential to help to reduce roadway congestion and air pollution in some areas.

Efforts to promote bicycle and pedestrian mobility in Montana appear best suited to Montana's urban areas. Bicycle and pedestrian components of urban area plans can include steps to sustain and increase the use of these modes. In the larger urban areas, walking and cycling can support local congestion management plans and contribute to improving the state's air quality.

Bicycle and pedestrian mobility serves mainly recreational purposes in rural areas. In rural areas, the greatest opportunity exists with rural touring routes. Efforts to improve rural facilities would be best suited to locations where they would be most cost-effective.

2. Planning Issues

- **Need to target resources to where demand is**

  The available journey-to-work data indicates differences in the use of bicycles between different counties in Montana. For example, bicycle use in Missoula and Gallatin Counties is much greater than in Yellowstone and Cascade (note Exhibit I–2). Similarly, there are likely to be regional variations in interest and demand for bicycle facilities. Any approach to targeting bicycle resources should recognize Montana's different urban, rural, and regional demands.

- **Accommodating bicycles and pedestrians on the highway**

  Bicycle and pedestrian facilities are most readily accommodated in the roadway right of way. Therefore, their planning, development, and maintenance are most readily incorporated into road planning and design. The key planning question is the level of highway development necessary for accommodating bicycles.

- **Designating a bicycle and pedestrian system**

  Montana has no officially designated statewide system of bicycle or pedestrian paths, routes, or trails. Designating a bicycle system is an approach taken in some states to identify preferred facilities for use by bicyclists. However, liability issues are a concern with many agencies responsible for highway maintenance.

- **Mobility benefits of bicycles and pedestrian facilities**

  Bicycling and walking provide travel options for those who are unable or chose not to drive. Depending upon the extent to which bicycling and walking results in a reduction of vehicle miles traveled, or a slower rate of growth, they could contribute to improved environmental quality. In the state's urban areas, increased use of bicycles along with other strategies could help to meet air quality standards, prevent congestion, and help to reduce demands on the highway system. Successful pedestrian and bicycling programs can provide key elements of a multimodal strategy for ensuring continued high levels of mobility in Montana.

- **Promotion of bicycle and pedestrian use through the provision of facilities**

  In many cases, local jurisdictions choose to invest in bicycle and pedestrian facilities rather than other modes, not because of predicted demand for these facilities but because they have the goal of providing infrastructure that supports modal alternatives. This approach assumes that providing enhanced infrastructure will promote and encourage the use of bicycles.

- **Bicycle and pedestrian facilities as part of the quality of life**

  At the local level, communities are increasingly interested in developing bicycle and pedestrian paths for recreational purposes. Such paths are valued more for

their contribution to community livability and the overall quality of life than as a mode of transportation. Providing safe and convenient pedestrian access is also an important component of many local plans.

- **Avoiding system discontinuity**

  Ensuring system continuity is an important element of state and local bicycle and pedestrian planning. Good coordination between the state, metropolitan planning organizations, and other local governments will avoid system discontinuity. An example of system discontinuity is a bridge reconstruction project on a busy bicycle route that does not incorporate bicycle facility.

- **Recognizing the differences in bicycle and pedestrian demands**

  Planning for bicycle and pedestrian facilities needs to be consistent and based upon the type of usage, current and anticipated demand, and urban and rural location.

III. Policy Goals and Actions

This section lists the potential range of policy goals and actions that MDT can take to address the bicycle and pedestrian transportation in Montana. The range of actions is limited to those that MDT can take.

POLICY GOAL A: Institutionalize Bicycle and Pedestrian Modes

Action A.1. Continue the MDT Bicycle and Pedestrian program with the following elements:

- A coordinator to plan and assist with implementation of the *TranPlan 21* goals and actions. This will include coordination with related state and local government planning efforts.
- A program of training and assistance to the Department staff to address the needs of non-motorized modes.
- Coordination with related state planning efforts including State Department of Fish, Wildlife and Parks, State Lands, Department of Public Health and Human Services, and Department of Natural Resources and Conservation.

MDT had a half time State Bicycle and Pedestrian Coordinator until 1995, when it hired a full-time coordinator in response to a *TranPlan 21* commitment. The coordinator is already undertaking a number of the tasks described above. This action would provide further direction for the development of the bicycle and pedestrian program. The extent of technical assistance will depend upon the staffing allocated to the bicycle and pedestrian program. Given the increasing levels of bicycle use in Montana, the key policy issue is whether additional effort should be made to promote even more use.

Action A.2. Work with the Department of Commerce to maintain bicycle-related tourist guides and information.

This action combines the identification of tourism-related bicycle routes with tourism-related economic development. Implementation may be undertaken at the regional level, but will be most successful if undertaken in conjunction with the Department of Commerce's tourism development program. The potential of joint state and federal funding, plus private sector funding, should be examined. In addition, the guides could be published as part of Montana's regional tourist profiles. The growing popularity of recreational bicycling offers a tourism-related economic development opportunity for Montana.

Action A.3. Assist other units of government to provide transportation facilities that encourage or consider use by bicyclists and pedestrians.

Local jurisdictions have limited staff and technical expertise to consider bicycle and pedestrian needs. MDT currently provides assistance to jurisdictions that request assistance. This action will allow MDT to take a more proactive approach in helping these jurisdictions address their bicycle and pedestrian needs more effectively. Implementing this action will be the responsibility of the bicycle and pedestrian coordinator through the development and distribution of technical materials and by providing local officials with opportunities.

Action A.4. Prepare and disseminate public service announcements addressing bicycle and pedestrian safety.

MDT currently provides bicycle and pedestrian safety information. This action provides the opportunity to increase public awareness that bicycling and walking are modes of transportation in Montana. The action would involve preparing radio and television "spots" as a new Public Information Office activity.

Action A.5. Consider results of the 2002 Montana Bicycle Safety Study in addressing bicycle safety issues.

MDT hired a consultant to conduct a study of bicycle safety in Montana in response to House Joint Resolution 37. MDT will use the results of the study and analysis in addition to other input to address the following issues:

- Roadway and highway signage appropriate for both bicyclists and motorists.
- MDT's roadway design guidelines and standards, including those for rumble strips, related to safety and travel concerns presented by bicyclists.
- Needs for sufficient shoulder and roadside spacing to accommodate motor vehicles and bicyclists on roadways.
- Incorporation of bicycle safety requirements into state and local capital improvement programs, consistent with federal law and prior policy.

Action A.6. Develop an updated bicycle and pedestrian use baseline.

This action involves MDT developing a new baseline to improve data collection for policy, planning, and other bicycle and pedestrian related decisions. The baseline will be periodically updated and will include non-journey-to-work purposes, including recreation and touring. MDT will also calculate the economic benefits of bicycling on the State economy.

POLICY GOAL B: Target Bicycle and Pedestrian Improvements to Account for Differences in Current and Future Use.

Action B.1. Identify the most significant bicycle routes designated through metropolitan planning organization and urban area plans and selected rural "touring routes" with the greatest demand or potential demand as the basis for planning and system improvement decisions.

This action can help to ensure that any bicycle-related improvements would contribute to an overall system and ensure that the development of bicycle facilities reflects current use and anticipated future demand.

This action does not require the designation of a bicycle route system. It takes as the starting point the premise a great demand for bicycle facilities and a great contribution that bicycles can make to mobility in Montana is in the state's urban areas. The action involves identifying the most significant routes in metropolitan and urban areas. These routes are being identified by local planning efforts. The action will also include selected rural "touring routes."

Action B.2. Establish a consistent planning approach and design guidelines for incorporating bicycle and pedestrian facilities into highway improvement projects.

Bicycle and pedestrian needs are considered as part of the current project development process. Many different highway improvements across Montana are now including bicycle and pedestrian facilities. However, these facilities are generally considered in the later design stages of a project. They are often not factored into the preliminary design and cost calculations. A consistent approach will help avoid system discontinuity by ensuring that MDT provides a level of development for the next twenty years. This action involves establishing a series of consistent guidelines for planning bicycle and pedestrian facilities. These guidelines will be tied to the identification of bicycle routes in Action B.1. Further, any guidelines will need to be flexible enough to allow for the wide differences between urban and rural areas, in addition to accounting for regional use variations.

Action B.3. Consider further bicycle and pedestrian improvements based upon proven use or expected future use.

This action applies to urban and other areas (excluding areas with transportation plans) by recognizing that in these areas there may be a need for bicycle and pedestrian facilities beyond accommodation on an existing shoulder. The nature of the facilities will depend on local conditions and demand. However, objective criteria are needed to determine how bicycle and pedestrian facilities should be considered. Developing thresholds based on bicycle and pedestrian use and urban-rural distinctions should avoid the over-design of facilities based upon unconstrained local demands.

The action anticipates distinguishing between different areas, based upon use and expected use, to avoid over-design. This will require establishing a way to determine bicycle usage. If current design standards for shoulder widths are adopted to meet bicycle needs in rural areas, there will be no increase in unit costs.

Action B.4. Improve bicycle and pedestrian facilities in Montana through incorporation in existing projects

MDT frequently includes bicycle and pedestrian improvements as part of highway reconstruction on an individual project basis, which results in increased local and user interest in funding these improvements. However, accommodating bicycles and pedestrians through changes in design increases the unit costs of individual projects. The scale of the unit costs will depend upon the design established for on-street facilities (bicycle lanes, wide curb lanes, and shoulders).

Unless there is a safety problem, bicycle and pedestrian improvements will be implemented only where they are part of existing or planned project improvements. For example, any rural principal arterial without a shoulder would not be improved just for bicycle and pedestrian needs. The needs would be addressed at the same time as reconstruction occurs. This action will be most applicable to National Highway and Surface Transportation Program funds and would not preclude Community Transportation Enhancement Program or Congestion Management and Air Quality Improvement Program funded projects.

Action B.5. Make selected bicycle and pedestrian improvements in urban areas as a congestion management and air quality improvement strategy.

This action recognizes that over the 20-year planning horizon there is some potential for the use of bicycles as part of an overall multimodal strategy for addressing congestion and air quality problems. This is particularly applicable to Montana's fastest growing counties-Gallatin, Missoula, and Flathead. Targeting existing Congestion Management and Air Quality Improvement Program funds to bicycle and pedestrian improvements provides a good funding mechanism.

Action B.6. Maintain consistent bicycle and pedestrian friendly design and maintenance standards.

As part of its on-going operations, MDT works to ensure that overall design standards for rumble strips, drive approaches, cross walks, signage, drainage, and so forth address the needs of bicycle and pedestrian users. MDT's maintenance staff will also continue to respond to requests for shoulder sweeping and other measures to enhance bicycle and pedestrian travel.

IV. References

U.S. Department of Transportation, Federal Highway Administration, *National Bicycling and Walking Study, Interim Report*, (Washington, D.C., 1991)

U.S. Department of Transportation, Federal Highway Administration, *Selecting Roadway Design Treatments to Accommodate Bicycles.* (Great Falls, Virginia: Center for Applied Research, 1994).

American Association of State Highway and Transportation Officials (AASHTO), G*uide for the Development of Bicycle Facilities.*

Status and Disposition of Original *TranPlan 21* Policy Goals and Actions

1995 *TranPlan 21* Policy Goals and Actions Bicycle and Pedestrian Policy Paper	Status	Disposition in *TranPlan 21 2002 Update*
POLICY GOAL A: Institutionalize Bicycle and Pedestrian Modes.	Retained.	
Action A.1. Develop the MDT Bicycle and Pedestrian program with the following elements:	On-going.	Retained as A.1.
Action A.2 Work with the Department of Commerce to prepare a bicycle related tourist guide.	On-going.	Retained as A.2.
Action A.3. Assist other units of government to provide transportation facilities that encourage or consider the use by bicyclists and pedestrians.	Retained.	Retained as A.3.
Action A.4. Prepare and disseminate public service announcements addressing bicycle and pedestrian safety.	Retained.	Retained as A.4.
Action A.5 Encourage the Safety Management System Steering Committee to use the safety management system to provide information on bicycle and pedestrian safety.	Not retained.	Original action addressed through current study and incorporated into Action A.5.
Action A.6. Encourage the Safety Management System Steering Committee to undertake efforts to educate motorists on safely interacting with bicyclists and pedestrians.	Not retained.	Original action addressed through current study and incorporated into Action A.5.

1995 *TranPlan 21* Policy Goals and Actions Bicycle and Pedestrian Policy Paper	**Status**	**Disposition in *TranPlan 21 2002 Update***
POLICY GOAL B: Target Bicycle-related and Pedestrian Improvements to Account for Urban, Rural, and Regional Differences in Current and Future Use.	Retained.	
Action B.1. Identify the most significant routes designated through metropolitan planning organization and urban area plans and selected rural "touring routes" with the greatest demand or potential demand as the basis for planning and system improvement decisions.	Retained.	Retained as Action B.1.
Action B.2. Establish a consistent planning approach and design guidelines for incorporating bicycle and pedestrian facilities into highway improvement projects.	Retained.	Retained as Action B.2.
Action B.3. In incorporated areas, unincorporated communities, and Indian Reservations, consider further bicycle improvements based upon proven use or expected future use.	Retained.	Retained as Action A.3.
Action B.4. Improve bicycle and pedestrian facilities in Montana through incorporation in existing projects	Retained.	Retained as Action B.4.
Action B.5. Make selected bicycle improvements in urban areas as a congestion management and air quality improvement strategy.	Retained.	Retained as Action B.5.
Action B.6. Maintain consistent bicycle friendly maintenance standards.	Retained.	Retained and expanded to include pedestrians as Action B.6.